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THE ANGLO-SAXONS OF THE KENTUCKY
MOUNTAINS.*

A STUDY IN ANTHROPOGEOGRAPHY

BY

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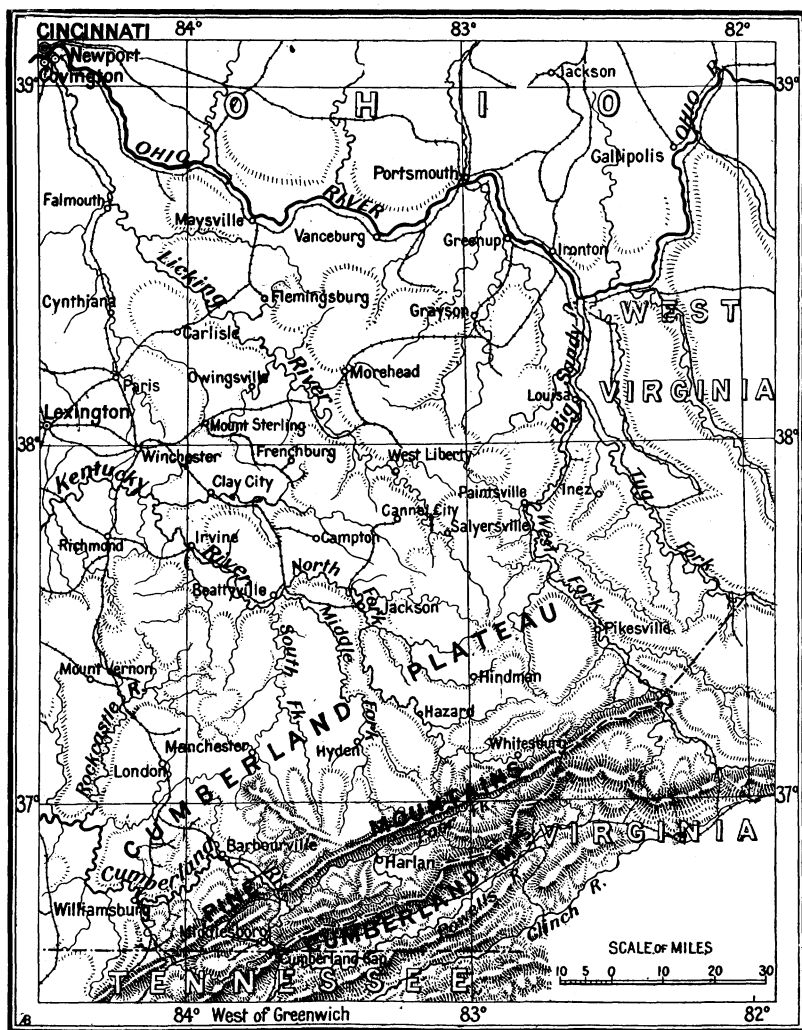
In one of the most progressive and productive countries of the world, and in that section of the country which has had its civilization and its wealth longest, we find a large area where the people are still living the frontier life of the backwoods, where the civilization is that of the eighteenth century, where the people speak the English of Shakespeare's time, where the large majority of the inhabitants have never seen a steamboat or a railroad, where money is as scarce as in colonial days, and all trade is barter. It is the great upheaved mass of the Southern Appalachians which, with the conserving power of the mountains, has caused these conditions to survive, carrying a bit of the eighteenth century intact over into this strongly contrasted twentieth century, and presenting an anachronism all the more marked because found in the heart of the bustling, money-making, novelty-loving United States. These conditions are to be found throughout the broad belt of the Southern Appalachians, but nowhere in such purity or covering so large an area as in the mountain region of Kentucky.

A mountain system is usually marked by a central crest, but the

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Appalachians are distinguished by a central zone of depression, flanked on the east by the Appalachian Mountains proper, and on the west by the Allegheny and the Cumberland Plateaus. This central trough is generally designated as the Great Appalachian Valley. It is depressed several hundred feet below the highlands on either side, but its surface is relieved by intermittent series of even-crested ridges which rise 1000 feet or more above the general level, running parallel to each other, and conforming at the same time to the structural axis of the whole system. The valleys between them owe neither width nor form to the streams which drain them. The Cumberland Plateau forms the western highland of the Great Valley in Eastern Kentucky, Tennessee, and Northern Alabama. This plateau belt reaches its greatest height in Kentucky, and slopes gradually from this section to the south and west. Its eastern escarpment rises abruptly 800 to 1500 feet from the Great Valley, and shows everywhere an almost perfectly straight skyline. The western escarpment is very irregular, for the streams, flowing westward from the plateau, have carved out their valleys far back into the elevated district, leaving narrow spurs running out into the low plains beyond. The surface is highly dissected, presenting a maze of gorge-like valleys separating the steep, regular slopes of the sharp or rounded hills. The level of the originally upheaved mass of the plateau is now represented by the altitude of the existing summits, which show a remarkable uniformity in the northeast-southwest line, and a slight rise in elevation from the western margin towards the interior.

About 10,000 square miles of the Cumberland Plateau fall within the confines of the State of Kentucky, and form the eastern section of the State. A glance at the topographical map of the region shows the country to be devoted by nature to isolation and poverty. The eastern rim of the plateau is formed by Pine Mountain, which raises its solid wall with level top in silhouette against the sky, and shows only one water-gap in a distance of 150 miles. And just beyond is the twin range of the Cumberland. Hence no railroads have attempted to cross this double border-barrier, except at the northeast and southeast corners of the State, where the Big Sandy and Cumberland Rivers have carved their way through mountains to the west. Railroads, therefore, skirt this upland region, but nowhere penetrate it. The whole area is a coalfield, the mineral being chiefly bituminous, with several thousand square miles of superior cannel coal. The obstructions growing out of the topography of the country, and the cheap river transportations afforded by the Ohio for the Kanawha



EASTERN PART OF KENTUCKY.

Note the very small development of railroads.

and Monongahela River coal have tended to retard the construction of railroads within the mountains, and even those on the margin of this upland region have been built since 1880.

Man has done so little to render this district accessible because nature has done so little. There are here no large streams penetrating the heart of the mountains, as in Tennessee, where the Tennessee River, drawing its tributaries from the easternmost ranges of the

Appalachians, cuts westward by flaring water-gaps through chain after chain and opens a highway from the interior of the system to the plains of the Mississippi. The Kentucky streams are navigable only to the margin of the plateau, and therefore leave this great area without natural means of communication with the outside world to the west, while to the east the mountain wall has acted as an effective barrier to communication with the Atlantic seaboard. Consequently, all commerce has been kept at arms' length, and the lack of a market has occasioned the poverty of the people, which, in turn, has prohibited the construction of highroads over the mountains of the Cumberland Plateau.

It is what the mountaineers themselves call a rough country. The steep hills rise from 700 to 1200 feet above their valleys. The valleys are nothing more than gorges. Level land there is none, and roads there are almost none. Valley and road and mountain stream coincide. In the summer the dry or half-dry beds of the streams serve as highways; and in the winter, when the torrents are pouring a full tide down the hollows, foot trails cut through the dense forest that mantles the slopes are the only means of communication. Then intercourse is practically cut off. Even in the best season transportation is in the main limited to what a horse can carry on its back beside its rider. In a trip of 350 miles through the mountains, we met only one wheel vehicle and a few trucks for hauling railroad ties, which were being gotten out of the forests. Our own camp waggons, though carrying only light loads, had to double their teams in climbing the ridges. All that had been done in most cases to make a road over a mountain was to clear an avenue through the dense growth of timber, so that it proved, as a rule, to be just short of impassable. For this reason the public of the mountains prefer to keep to the valleys with their streams, to which they have given many expressive and picturesque names, while the knobs and mountains are rarely honored with a name. We have Cutshin Creek, Hell-fer-Sartain, Bullskin Creek, Poor Fork, Stinking, Greasy, and Quicksand Creek. One trail leads from the waters of Kingdom-Come down Lost Creek and Troublesome, across the Upper Devil and Lower Devil to Hell Creek. *Facilis descensus Averno*, only no progress is easy in these mountains. The creek, therefore, points the highway, and is used to designate geographical locations. When we would inquire our way to a certain point, the answer was, "Go ahead to the fork of the creek, and turn up the left branch," not the fork of the road and the path to the left. A woman at whose cabin we lunched one day said,

"My man and me has been living here on Quicksand only ten years. I was born up on Troublesome."

All passenger travel is on horseback. The important part which the horse plays, therefore, in the economy of the mountain family recalls pioneer days. Almost every cabin has its blacksmith's forge under an open shed or in a low outhouse. The country stores at the forks or fords of the creek keep bellows in stock. Every mountaineer is his own blacksmith, and though he works with very simple implements, he knows a few fundamental principles of the art, and does the work well. Men and women are quite at home in the saddle. The men are superb horsemen, sit their animals firm and erect, even when mounted on top of the meal-bag, which is the regular accompaniment of the horseman. We saw one day a family on their way to the country store to exchange their produce. The father, a girl, and a large bag of Indian corn were mounted on one mule, and the mother, a younger girl, and a black lamb suspended in a sack from the saddle-bow on the other. It is no unusual thing to see a woman on horseback, with a child behind her and a baby in her arms, while she holds an umbrella above them.

But such travel is not easy, and hence we find that these Kentucky mountaineers are not only cut off from the outside world, but they are separated from each other. Each is confined to his own locality, and finds his little world within a radius of a few miles from his cabin. There are many men in these mountains who have never seen a town, or even the poor village that constitutes their county-seat. Those who have obtained a glimpse of civilization have gone down the head-waters of the streams on lumber rafts, or have been sent to the State penitentiary at Frankfort for illicit distilling or feud murder. The women, however, cannot enjoy either of these privileges; they are almost as rooted as the trees. We met one woman who, during the twelve years of her married life, had lived only 10 miles across the mountain from her old home, but had never in this time been back home to visit her mother and father. Another back in Perry county told us she had never been farther from home than Hazard, the county-seat, which was only 6 miles distant. Another had never been to the post-office, 4 miles away; and another had never seen the ford of the Rockcastle River, only 2 miles from her home, and marked, moreover, by the country store of the district.

A result of this confinement to one locality is the absence of anything like social life, and the close intermarriage of families inhabiting one district. These two phenomena appear side by side here as

in the upland valleys of Switzerland and other mountain countries where communication is difficult. One can travel for 40 miles along one of the head streams of the Kentucky River and find the same names recurring in all the cabins along both its shores. One woman in Perry County told us she was related to everybody up and down the North Fork of the Kentucky and along its tributary creeks. In Breathitt County, an old judge, whose family had been among the early settlers on Troublesome, stated that in the district school near by there were ninety-six children, of whom all but five were related to himself or his wife. This extensive intermarriage stimulates the clan instinct and contributes to the strength of the feuds which rage here from time to time.

It is a law of biology that an isolating environment operates for the preservation of a type by excluding all intermixture which would obliterate distinguishing characteristics. In these isolated communities, therefore, we find the purest Anglo-Saxon stock in all the United States. They are the direct descendants of the early Virginia and North Carolina immigrants, and bear about them in their speech and ideas the marks of their ancestry as plainly as if they had disembarked from their eighteenth-century vessel but yesterday. The stock is chiefly English and Scotch-Irish, which is largely Teutonic in origin. There is scarcely a trace of foreign admixture. Occasionally one comes across a French name, which points to a strain of Huguenot blood from over the mountains in North Carolina; or names of the Germans who came down the pioneer thoroughfare of the Great Appalachian Valley from the Pennsylvania Dutch settlements generations ago. But the stock has been kept free from the tide of foreign immigrants which has been pouring in recent years into the States. In the border counties of the district where the railroads run, and where English capital has bought up the mines in the vicinity, the last census shows a few foreign-born, but these are chiefly Italian laborers working on the road-bed, or British capitalists and employees. Four of the interior counties have not a single foreign-born, and eight others have only two or three.

Though these mountain people are the exponents of a retarded civilization, and show the degenerate symptoms of an arrested development, their stock is as good as any in the country. They formed a part of the same tide of pioneers which crossed the mountains to people the young States to the southwest, but they chanced to turn aside from the main stream, and ever since have stagnated in these mountain hollows. For example, over a hundred years ago eleven

Combs brothers, related to General Combs of the Revolutionary army, came over the mountains from North Carolina. Nine of them settled along the North Fork of the Kentucky River in the mountains of Perry County, one went further down the stream into the rough hill country of Breathitt County, and the eleventh continued on his way till he came into the smiling regions of the Bluegrass, and there became the progenitor of a family which represents the blue blood of the state, with all the aristocratic instincts of the old South; while their cousins in the mountain go barefoot, herd in one-room cabins, and are ignorant of many of the fundamental decencies of life.

If the mountains have kept out foreign elements, still more effectually have they excluded the negroes. This region is as free from them as northern Vermont. There is no place for the negro in the mountain economy, and never has been. In the days of slavery this fact had momentous results. The mountains did not offer conditions for plantation cultivation, the only system of agriculture in which slaves could be profitably employed. The absence of these conditions and of the capital wherewith to purchase negroes made the whole Appalachian region a non-slave-holding section. Hence, when the rupture came between the North and South, this mountain region declared for the Union, and thus raised a barrier of disaffection through the center of the Southern States. It had no sympathy with the industrial system of the South; it shared the democratic spirit characteristic of all mountain people, and likewise their conservatism, which holds to the established order. Having, therefore, no intimate knowledge of the negro, our Kentucky mountaineers do not show the deep-seated prejudice to the social equality of blacks and whites which characterizes all other Kentuckians. Till abolished by law four years ago, there existed on the western margin of the Cumberland Plateau, a flourishing college for the co-education of the Bluegrass blacks and mountain whites; and this is probably the only geographical location south of the Mason and Dixon line where such an institution could exist.

Though the mountaineer comes of such vigorous stock as the Anglo-Saxons, he has retained little of the ruddy, vigorous appearance of his forebears. The men are tall and lank, though sinewy, with thin bony faces, sallow skins, and dull hair. They hold themselves in a loose-jointed way; their shoulders droop in walking and sitting. Their faces are immobile, often inscrutable, but never stupid; for one is sure that under this calm exterior the mountaineer is doing a deal of thinking, which he does not see fit to share with

the "furriner," as he calls every one coming from the outside world. The faces of the women are always delicately moulded and refined, with an expression of dumb patience telling of the heavy burden which life has laid upon them. They are absolutely simple, natural, and their child-like unconsciousness of self points to their long residence away from the gaze of the world. Their manners are gentle, gracious, and unembarrassed, so that in talking with them one forgets their bare feet, ragged clothes, and crass ignorance, and in his heart bows anew to the inextinguishable excellence of the Anglo-Saxon race.

The lot of a mountain woman is a hard one. Only the lowest peasantry of Europe can show anything to parallel it. She marries between twelve and fifteen years a husband who is between seventeen and twenty. The motive in marriage is very elemental, betrays little of the romantic spirit. Husband and wife speak of each other as "my man" and "my woman." A girl when she is twenty is put on the "cull list," that is, she is no longer marriageable. A man is included in this undesirable category at twenty-eight; after that he can get no one to take him "except some poor wider-woman," as one mountain matron expressed it, adding, "gals on the cull-list spend their time jes' bummin' around among their folks." During a ride of 350 miles, with visits at a great many cabins, we met only one old maid; her lot was a sorry one, living now with a relative, now with a friend, earning her board by helping to nurse the sick or making herself useful in what way she could. The mountain system of economy does not take into account the unmarried woman, so she plunges into matrimony with the instinct of self-preservation. Then come children; and the mountain families conform to the standard of the patriarchs. A family of from ten to fifteen offspring is no rarity, and this characterizes not only the mountains of Kentucky, but the whole area of the Appalachian system. In addition to much child-bearing, all the work of the pioneer home, the spinning and weaving, knitting of stockings, sometimes even the making of shoes and moccasins, falls on the woman. More than this, she feeds and milks the cow, searches for it when it has wandered away "in the range" or forest, hoes weeds in the corn, helps in the ploughing, carries water from the spring, saws wood and lays "stake and ridered" fences. A mountain woman who had a husband and two sons, and who had been employed all day in making a fence, lifting the heavy rails above the height of her own head, replied in a listless way to the question as to what the men

did, with, "the men folks they mostly sets on a fence and chaw tobacco and talk politics."

The mountain woman, therefore, at twenty-five looks forty, and at forty looks twenty years older than her husband. But none of the race are stalwart and healthy. The lack of vigour in the men is due chiefly to the inordinate use of moonshine whiskey, which contains 20 per cent. more alcohol than the standard liquor. They begin drinking as mere boys. We saw several youths of seventeen intoxicated, and some women told us boys of fourteen or fifteen drank. Men, women, and children looked underfed, ill nourished. This is due in part to their scanty, unvaried diet, but more perhaps to the vile cooking. The bread is either half-baked soda biscuits eaten hot, or corn-pone with lumps of saleratus through it. The meat is always swimming in grease, and the eggs are always fried. The effect of this shows, in the adults, in their sallow complexions and spare forms; in the children, in pimples, boils, and sores on their hands and faces. This western side of the mountains, moreover, has not an abundant water-supply, the horizontal strata of the rocks reducing the number of springs. Hence all the mountain region of Kentucky, West Virginia, and Tennessee shows a high percentage of diarrhœal diseases, typhoid, and malarial fever.

The home of the mountaineer is primitive in the extreme, a survival of pioneer architecture, and the only type distinctly American. It is the blind or windowless one-room log cabin, with the rough stone chimney on the outside. The logs are sometimes squared with the hatchet, sometimes left in their original form with the bark on; the interstices are chinked in with clay. The roofs are covered with boards nearly an inch thick and 3 feet long, split from the wood by a wedge, and laid on, one lapping over the other like shingles. The chimneys, which are built on the outside of the houses, and project a few feet above the roof, lend a picturesque effect to the whole. They are made of native rock, roughly hewn and cemented with clay; but the very poorest cabins have the low "stick chimney," made of laths daubed with clay. In the broader valleys, where the conditions of life are somewhat better, the double cabin prevails—two cabins side by side, with a roofed space between, which serves as a dining-room during the warmer months of the year. Sometimes, though rarely, there is a porch in front, covered by an extension of the sloping roof. In some of the marginal counties of the mountain region and in the sawmill districts, one sees a few two-story frame dwellings. These are deco-

rated with ornamental trimming of scroll-saw work in wood, oftentimes colored a light blue, along the edges of the gables, and defining the line between the two stories. The regulation balcony over the front door and extending to the roof has a balustrade of the same woodwork in excellent, chaste design, sometimes painted and sometimes in the natural color. These houses, both in their architecture and style of ornamentation, recall the village dwellings in Norway, though not so beautiful or so richly decorated. But the usual home of the mountaineer is the one-room cabin. Near by is the barn, a small square log structure, with the roof projecting from 8 to 10 feet, to afford shelter for the young cattle or serve as a milking-shed. These vividly recall the mountain architecture of some of the Alpine dwellings of Switzerland and Bavaria, especially when, as in a few instances, the roofs are held down by weight-rocks to economize hardware or protect them against the high winds. Very few of them have hay-lofts above, for the reason that only a few favored districts in these mountains produce hay.

The furnishings of the cabins are reduced to the merest necessities of life, though in the vicinity of the railroads or along the main streams where the valley roads make transportation a simpler problem, a few luxuries like an occasional piece of shop-made furniture and lamp-chimneys have crept in. One cabin which we visited near the foot of Pine Mountain, though of the better sort, may be taken as typical. Almost everything it contained was home-made, and only one iron-bound bucket showed the use of hardware. Both rooms contained two double beds. These were made of plain white wood, and were roped across from side through auger-holes to support the mattresses. The lower one of these was stuffed with corn-shucks, the upper one with feathers from the geese raised by the housewife. The sheets, blankets, and counterpanes had all been woven by her, as also the linsey-woolsey from which her own and her children's clothes were made. Gourds, hung on the walls, served as receptacles for salt, soda and other kitchen supplies. The meal-barrel was a section of log, hollowed out with great nicety till the wood was not more than an inch thick. The flour-barrel was a large firkin, the parts held in place by hoops, fastened by an arrow-head at one end of the withe slipped into a slit in the other; the churn was made in the same way, and in neither was there nail or screw. The washtub was a trough hollowed out of a log. A large basket was woven of hickory slips by the mountaineer himself, and two smaller ones made of the cane of the broom corn and bound at

the edges with coloured calico, were the handiwork of his wife. Only the iron stove with its few utensils, and some table knives, testified to any connection with the outside world. The old flint-lock gun and powder-horn hanging from a rafter gave the finishing touch of local colour to this typical pioneer home. Daniel Boone's first cabin in the Kentucky wilderness could not have been more primitive.

Some or most of these features can be found in all mountain homes. Some cabins are still provided with hand-mills for grinding their corn when the water-mills cease to run in a dry summer. Clay lamps of classic design, in which grease is burned with a floating wick, are still to be met with; and the manufactured product from the country store is guiltless of chimney. Every cabin has its spinning-wheel, and the end of the "shed-room" is usually occupied by a hand-loom. Only in rare cases is there any effort to beautify these mountain homes. Paper flowers, made from old newspaper, a wood-cut from some periodical, and a gaudy advertisement distributed by an itinerant vendor of patent medicines, make up the interior decoration of a cabin. Sometimes the walls are entirely papered with newspapers, which are more eagerly sought for this purpose than for their literary contents. Material for exterior decoration is more accessible to the mountain housewife, and hence we find, where her work-burdened life will permit, that she has done all she can for her front yard. Poppies, phlox, hollyhock, altheas, and dahlias lift their many-coloured blooms above the rail fence. Over the porch, where there is one, climb morning-glory, sweet potato vines, and wild mountain ivy; and from the edge of the roof are suspended home-made hanging baskets, contrived from old tin cans, buckets, or anything that will hold soil, and filled with the various ferns and creepers which the forests furnish in great beauty and abundance.

A vegetable garden is always to be found at the side or rear of the cabin. This is never large, even for a big family. It is ploughed in the spring by the man of the household, and enriched by manure from the barn, being the only part of the whole farm to receive any fertilizer. Any subsequent ploughing and all weeding and cultivation of the vegetables is done by the women. The average mountain garden will yield potatoes, beets, cabbages, onions, pumpkins, and tomatoes of dwarf size. Beans are raised in considerable quantities and dried for winter use. The provisions for the luxuries of life are few. Adjoining every garden is a small patch of tobacco, which is raised only for home consumption. It is consumed, moreover, by

both sexes, old and young, and particularly by the woman, who both smoke and "dip" snuff, making the brush for the dipping from the twig of the althea. In a large gathering like a funeral, one can often see girls from twelve to fourteen years old smoking their clay or corn-cob pipes. A young woman who went through the mountains last summer to study the conditions for a social settlement there, found the children at a district school amusing themselves by trying to see who could spit tobacco-juice nearest a certain mark on the school-house wall, the teacher standing by and watching the proceeding with interest.

Sugar is never seen in this district, but backwoods substitutes for it abound. Almost every cabin has its beehives, and anywhere from ten to twenty. The hives are made from hollowed-out sections of the bee-gum tree, covered with a square board, which is kept in place by a large stone. The bees feed in the early spring on the blossoms of the yellow poplar, but in the western counties, where this tree is rapidly being cut out of the forest for lumber, honey is no longer so abundant. But the mountain region, as a whole produces large amounts of honey and wax. Pike County, on the Virginia border, produced over 60,000 lbs. of honey in 1890. Maple sugar is gotten in considerable quantities from the sugar maple, which abounds. As one rides through the forests, he sees here and there the rough little log troughs at the base of these trees, the bit of cane run into the hole bored through the bark for the sap, and at long intervals a log sugar-house with its huge cauldron for reducing the syrup. Maple sugar is used only as a sweetmeat. The mountaineer put his main reliance for sweetening on sorghum molasses, which he makes from the sorghum cane. Two acres of this will provide an average mountain household with sorghum molasses, or "long sweetening," for a year. They eat it with their "pone" bread and beans; coffee thus sweetened they drink with relish, though to the palate of the uninitiated it is a dose. Sugar, or "short sweetening," is a rarity.

Conditions point to agriculture as the only means for the Kentucky mountaineer to gain a livelihood. Mineral wealth exists in abundance in this section, but the lack of transportation facilities prevents its exploitation; so the rough hillsides must be converted into field and pasture. The mountaineer holds his land in fee simple, or by squatter claim. This is based, not upon title, but merely on the right of possession, which is regarded, moreover, as a thoroughly valid tenure in a country which still preserves its frontier character. Large

tracts of Kentucky mountain lands are owned by persons outside the state, by purchase or inheritance of original pioneer patents, and these are waiting for the railroads to come into the country, when they hope to realize on the timber and mines. In the mean time the mountaineers have been squatting on the territory for years, clearing the forests, selling the timber, and this with conscious impunity, for interference with them is dangerous in the extreme. Every lawyer from the outside world who comes up here to a county courthouse to examine titles to the land about, keeps his mission as secret as possible, and having accomplished it, leaves the town immediately. If further investigation is necessary, he does not find it safe to return himself, but sends a substitute who will not be recognized.

The pioneer character of the region is still evident in the size of the land-holdings. In the most mountainous parts near the eastern border-line the farms average from 160 to 320 acres; in the western part of the plateau, from 100 to 160 acres. Of the whole state, the mountain counties show by far the largest proportion of farms of 1000 acres and over. Pike County has sixty-six such. Mountaineers in two different sections told us that the land on the small side creeks was better, and there farms averaged about 200 acres; but that on main streams, like the North Fork of the Kentucky River and Poor Fork of the Cumberland, the farms were usually 600 acres, because the soil was poorer. The cause for this was not apparent, unless it was due to exhaustion of soil from long tilling, as the valleys of the main streams, being more accessible, were probably the earliest settled.

Only from thirteen to thirty per cent. of the acreage of the farms is improved; the rest is in forest or pasture. Land is cleared for cultivation in the old Indian method by "girdling" or "deadening" the trees, and the first crop is planted amidst the still standing skeletons of ancient giants of the forests. Indian corn is the chief crop raised, and furnished the main food-supply for man and beast. Great fields of it cover the steep mountain sides to the very top, except where a farmer, less energetic or more intelligent than his fellows, has left a crown of timber on the summit to diminish the evil of washing. The soil on the slopes is thin, and in the narrow V-shaped valleys there is almost no opportunity for the accumulation of alluvial soil. Hence the yield of corn is only from ten to twelve bushels to an acre, only one-third that in the rich Bluegrass lands of Central Kentucky. But population is so sparse that the harvest generally averages forty bushels *per capita*. In the "up-

right" farms all ploughing is done horizontally around the face of the mountain, but even then the damage from washing is very great, especially as the staple crop forms no network of roots to hold the soil and requires repeated ploughing. In consequence, after two successive crops of corn the hillside is often quite denuded, the soil having been washed away from the underlying rocks. The field then reverts to a state of nature, growing up in weeds and briars, and furnishing a scanty pasturage for cattle. Level land is very scarce, and is to be found only in the long serpentines of the main streams; but even here, from long cultivation and lack of fertilizers, a field is exhausted by two crops, and has to "rest" every third year. Clover is almost never seen. The mountaineers maintain it will not grow here, although on our circuit we did see two fields.

Of other cereals beside corn the yield is very small. Some oats are raised; but rye, wheat, barley, and buckwheat are only occasionally found. One or two rows of broom-corn provide each cabin with its material for brooms. Sometimes a small quantity of hay, poor in quality, is cut from a fallow-field for winter use. The yield in all the crops is small, because the method of agriculture employed is essentially extensive. The labour applied is small, limited to what is possible for a man and his family, generally, too, the feminine part of it, because his sons found their own families at an early age. It is almost impossible to hire extra labourers, because this element of the population, small at best, finds more profitable and steadier employment in various forms of lumber industry. The agricultural implements used are few, and in general very simple, except in the vicinity of the railroad. In remote districts the "bull-tongue" plough is in vogue. This primitive implement is hardly more than a sharpened stick with a metal rim; but as the foot is very narrow, it slips between the numerous rocks in the soil, and is therefore adapted to the conditions. Natives in two different sections told us that "folks fur back in the mountains" resort to something still simpler—a plough which is nothing but a fork of a tree, the long arm forming the beam, and the shorter one the foot.

The mountains of Kentucky, like other upland regions, are better adapted to stock farming; but, as the native has not yet learned the wisdom of putting his hillside in grass to prevent washing, and at the same time to provide pasturage, the stock wanders at will in the "range" or forest. There sheep thrive best. They feed on the pea-vine, which grows wild in the dense woods, but will not grow on cultivated land. One native explained that the sheep liked the

"range," because they could take refuge from winter storms and the intense noonday heat of summer in "the stone houses." In answer to the inquiry whether he constructed such houses, he answered with the characteristic reverence of the mountaineer, "No; God made 'em. They're God's houses—just caves or shelter places under ledges of rock." About half of the mountain sheep are Merino and English breeds, but they have deteriorated under the rough conditions obtaining there. While the average yield per fleece for the whole state of Kentucky is over 4 lbs. of wool, for the mountain counties it is only 2 lbs., and in some localities drops to $1\frac{1}{3}$ lb. These sheep are naturally a hardy stock, and are often bought up by farmers from the lowlands, taken down to the Bluegrass and fattened for a few months, and sold at a profit.

Sheep are the only product of the mountain farm that can find their way to an outside market and do not suffer from the prevailing lack of means of transportation. In regard to everything else, the effort of the native farmer is paralyzed by the want of a market. If he fattens his hogs with his superfluous corn, they are unfit to carry their own weight over the 40 or 50 miles of rough roads to the nearest railroad, or they arrive in an emaciated condition. So he contents himself with his "razor-back" pigs, which climb the hills with the activity of goats and feed with the turkeys on the abundant mast in the forests. Cattle also are raised only for home use. Steers are used pretty generally for ploughing, and especially for hauling logs. Every cabin has one cow; occasionally more. These can be seen anywhere browsing along the edge of the road, where the clearing has encouraged the grass. In the late summer they feed greedily on "crap grass," or Japan clover (*Lespedeza striata*), which springs up wherever there is a patch of sunlight in the forest. Knowing that dairy products are natural staples in almost all mountain countries of the world, as we penetrated into this district we made constant inquiries in regard to cheese, but everywhere found it conspicuous by its absence. However, on our returning to civilization, the census reports on mountain industries revealed the surprising fact that just one county, in the southwestern part of the district and on the railroad, was cheese-producing, and that it made 6374 lbs. in 1889. The mystery was explained on referring to the statistics of population, which showed that this county harboured a Swiss colony of 600 souls. In the state of West Virginia, also, where the topography of the country is a repetition of that of eastern Kentucky, no cheese is produced; but, on the other hand, considerable quantities are made

in all the mountain counties of Tennessee and Virginia. These states, again, are alike in having, as their geographical structure, the broader inter-montane valleys between the chain-like linear ranges of the Great Appalachian depression. In 1889, Lee County, Virginia, produced 8595 lbs. of cheese; while just over Cumberland Mountain, which forms its western border, Bell County, Kentucky, produced not an ounce.

In spite of the hard conditions of life, the Kentucky mountaineer is attached to this rough country of his. Comparatively few emigrate, and many of them come back, either from love of the mountains or because the seclusion of their previous environment has unfitted them to cope with the rush and enterprise of life in the lowlands. One mountaineer told us that, though it was a poor country, "the men mostly stays here." Another who had travelled much through the district in his occupation of selecting white oak timber for a lumber company, estimated that about one man in five emigrated; such generally go to Missouri, Arkansas, and Texas. We met several who had been out West, but the mountains had drawn them back home again. The large majority of the population, therefore, stay in their own valley, or "cove," as they call it, divide up the farm, and live on smaller and smaller estates, while the corn-fields creep steadily up the mountains. The population of these twenty-eight counties with their 10,000 square miles area was about 220,000 in 1880, or over twenty to the square mile; that in 1890 was 270,000, showing an increase of 25 per cent. As the ratio in the past decade has risen, there is now a population of 340,000, or thirty-four to the square mile, while for the state at large the ratio is fifty-four. This growth of population is to be attributed almost entirely to natural increase; and as the accessions from the outside are practically limited to the foreign element, only two or three thousand all told, employed in the coal-mines and on the railroads, so large a percentage of increase precludes the possibility of much emigration. Cities there are none, and the villages are few, small, and wretched. This is true also of the county-seats, which in the interior counties average only from 300 to 400 souls; while those of the marginal counties and located on railroads encircling the mountain districts sometimes rise to 1500, but this is rare.

In consequence of his remoteness from a market, the industries of the mountaineer are limited. Nature holds him in a vise here. As we have seen, a few of his sheep may find their way to the railroad, but his hogs are debarred by the mountains from becoming articles

of commerce. The same is true of his corn, which is his only superabundant crop; and this, therefore, by a natural economic law, the mountaineer is led to convert into a form having less bulk and greater value. He makes moonshine whisky, and not all the revenue officers of the country have succeeded in suppressing this industry. At our first camping-place, only 15 miles from the railroad, we were told there were twenty illicit stills within a radius of 5 miles. Two women, moreover, were pointed out to us who carried on the forbidden industry; their husbands had been killed in feuds, so they continued to operate the stills to support their families. Living so far from the arm of the law, the mountaineer assumes with characteristic independence that he has a right to utilize his raw material as he finds expedient. He thinks it laudable to evade the law—an opinion which is shared by his fellows, who are ready to aid and abet him. He therefore sets up his still in some remote gorge, overhung by trees and thickly grown with underbrush, or in some cave whose entrance is effectually screened by boulders or the dense growth of the forest, and makes his moonshine whisky, while he leaves a brother or partner on guard outside to give warning if revenue officers attempt a raid. It is a brave man who will serve as deputy marshal in one of these mountain counties, for raiding a still means a battle, and the mountaineers, like all backwoodsmen, are fine marksmen. In Breathitt County, called "Bloody Breathitt," four deputy marshals have been killed in the past six months. The moonshiner fully understands the penalty for illicit distilling, and if he is caught, he takes his punishment like a philosopher—all the more as there is no opprobrium attached in his community to a term in the penitentiary for this crime. The disgrace falls upon the one who gave testimony against the illicit distiller; and often a mountaineer, if summoned as a witness in such a case, leaves his county till the trial is over, rather than appear for the prosecution. Most of the moonshine is sold within the mountains. The natives, physically depressed by lack of nourishment and by the prevalent diseases of the district, crave stimulants; so the demand for spirits is steady. Not content with the already excessive strength of moonshine whisky, they often add pepper or wood-ashes to make it more fiery. The result is maddened brains when under its influence, and eventually ruined constitutions.

Forests of magnificent timber cover the Kentucky mountains, and supply the only industry which brings any considerable money from the outside world, because the only one which can utilize the small,

rapid streams for transportation. The steep-sided valleys are productive of valuable hardwood timber. Many varieties of oak, walnut, poplar, chestnut, maple, ash, and tulip trees grow to magnificent size. Log-rolling begins in the fall after the Indian corn harvest, and continues through the winter till March. The logs are deposited along the banks of the streams to wait till a "tide" or sudden rise supplies enough water to move them. Sometimes, where a creek or "branch" is too small to carry its prospective burden, the loggers build across it a "splash dam," behind which logs and water accumulate to the requisite point, and then the barrier is knocked loose, when tide and timber go rushing down the channel. On the main streams of the Kentucky, Big Sandy, Licking, and Cumberland, the logs are rafted and floated down to the saw-mills in the lowlands. All the headwaters of these rivers are marked out to the traveller through the mountains by the lumber stranded from the last "tide" and strewn along their banks.

Some of the wood within a day's hauling of the railway is worked up in a form ready for commerce, but generally with great waste of good material. The fine chestnut oaks are cut down in large quantities simply to peel off tan-bark, while the lumber is left to rot. Railroad ties are cut and shaped in the mountains from the oak and hauled to the railroad. The making of staves of white oak for whisky-barrels is also a considerable industry. The trees are sawed across the length of the stave, and split by wedges into billets, which are then hollowed out and trimmed into shape. This last process is performed by an implement run sometimes by steam, generally by horse-power, for in the latter form it is more readily transported over the rough mountain roads from place to place, as the supply of white oak is exhausted. These staves bring \$32.00 a thousand delivered at the railroad. The mountain labourer working at stave-making or at the portable saw-mills earns 75 cents a day, while the usual wages for farm hands in this district are only 50 cents.

The trades in the mountains are the primitive ones of a pioneer community—cobbler, blacksmith, and miller; but even these elemental industries have not been everywhere differentiated. Many a cabin has its own hand-mill for grinding corn when the water-mill is too remote. Many a native still makes moccasins of calf or raccoon skin for himself and his family to spare the more expensive shoes; and it is a poor sort of mountaineer who cannot and does not shoe his own horses and steers. Here is reproduced the independence of the pioneer home. Spinning and weaving survive as an industry

of the women. In some few localities one can still see the flax in every stage, from the green growth in the field to the finished home-spun in 100-yard pieces; or, again, one sees a cotton patch in the garden, a simple primitive gin of home invention for separating the fibre, and understands the origin of the cotton thread in the linsey-woolsey cloth of domestic manufacture which furnishes the dresses for women and children. Cotton and flax spinning, however, have died out greatly during the past few years, since the introduction of cheap cotton goods into the mountain districts. Spinning of woollen yarn for stockings is still universal, with the concomitant arts of carding and dyeing; while the weaving of linsey-woolsey for clothes or blankets is an accomplishment of almost every mountain woman. One native housewife showed us her store of blankets, woven by her mother and herself. They were made in intricate plaids of original design and combination of colour, and the owner told us she worked without a pattern and without counting the threads, trusting to her eye for accuracy. Many of the dyes, too, she made herself from certain trees, though a few she bought at the country store. The home-woven counterpanes are very interesting, because the designs for these have been handed down from generation to generation, and are the same that the Pilgrim Fathers brought over to New England. But the mountain woman puts forth her best taste and greatest energy in making quilts. In travelling through this section one looks out for some expression of the æsthetic feeling as one finds it in the wood-carving of the Alps and Scandinavian mountains, the metal-work of the Caucasus, the Cashmere shawls of the Himalayas, and the beautiful blankets of the Chilcat Indians. Gradually it is borne in upon him that quilt-making amounts to a passion among the women of the Kentucky mountains; that it does not merely answer a physical need, but is a mode of expression for their artistic sense; and there is something pathetic in the thought. They buy the calico for the purpose, and make their patchwork in very intricate designs, apparently getting their hints from their own flower-gardens; at any rate, the colours in certain common garden flowers were reproduced in some quilts we saw, and the effect was daring but artistic. Quilt-making fills the long leisure hours of the winter, and the result shows on the open shelves or cupboard which occupies a corner in every house. Passing a one-room cabin on the headwaters of the Kentucky River, we counted seventeen quilts sunning out on the fence.

The only work of the women which brings money into the

family treasury is searching for ginseng, or "sang-pickin'," as the mountaineer calls it. This root is found now only in the wildest, most inaccessible ravines; but the women go out on their search barefoot amid the thick brush and briars, taking their dogs along to keep off the rattlesnakes. They also gather "yellow root" (*Hydrastis canadensis*), which with the ginseng (*Panax quinquefolium*) they dry and then barter for produce at the nearest store, the former at the rate of 40 cents per pound, the latter at three dollars. Most of the trade in the mountains is barter, for money is as scarce as in genuine pioneer countries, and the people are accordingly unfamiliar with it. A native who came over the mountains from some remote cove to sell eggs to a camping party this past summer, was offered a dollar bill for his produce, but refused to accept it, as he had never seen one before, his experience having been limited to silver dollars and small change. At another place we found that the people were reluctant to take the paper currency of the issue of 1892, anything so recent having not yet penetrated into their fastnesses. But the lack of money does not prevent them from being eager traders, especially in horseflesh. One of the attractions of Sunday church-going to the men is the opportunity it offers for this purpose. A glance at one of these little mountain churches when meeting is going on reveals the fitness of the occasion. The people have gathered from every direction for miles around; they have come on their best horses and now every tree on the edge of the clearing has become a hitching-post. Groups form outside before and after the service, satisfying their social craving, and, with the few topics of conversation at their command, talk naturally drifts upon the subject of their "beasties," with the inevitable result of some trading. Their trading propensity carries them so far that they often trade farms as they would horses, no deeds being executed.

As the isolation of his environment has left its stamp upon every phase of the outer life of the mountaineer, so it has laid its impress deep upon his inner nature. The remoteness of their scattered dwellings from each other and from the big world beyond the natural barriers, and the necessary self-reliance of their pioneer-like existence, has bred in them an intense spirit of independence which shows itself in many ways. It shows itself in their calm ignoring of the revenue laws, and in their adherence to the principle of the blood-feud which inculcates the duty of personal vengeance for a wrong. In consequence of this spirit of independence, and of its

antecedent cause in their slight dealings with men, our Kentucky mountaineers have only a semi-developed commercial conscience. They do not appreciate the full moral force of a contract; on this point they have the same vague ideas that many women have, and from the same cause. At all times very restive under orders, when they have taken employment under a superior, their service must be politely requested, not demanded. If offended, they throw up their job in a moment, and go off regardless of their contract and of the inconvenience they may occasion their employer. Every man is accustomed to be his own master, to do his own work in his own way and his own time. And this brings us to another curious characteristic of the mountaineer, also an effect of his isolation. He has little sense of the value of time. If he promises to do a certain thing on a certain date, his conscience is quite satisfied if he does it within three or four days after the appointed time. For instance, some mountaineers had promised to furnish horses for our camping party, which was to start from a certain village on July 15; when that day came half a dozen horses had failed to appear, but their places were supplied and the party moved off. During the succeeding week, delinquent mountaineers dribbled into town with their horses, and were surprised to find they were too late, explaining that they did not think a few days would make any difference.

Living so far from the rush of the world, these highlanders have in their manner the repose of the eternal hills. In the presence of strangers they are quite free from self-consciousness, and never lose their simplicity or directness. There is no veneer about these men; they say exactly what they think, and they think vigorously and shrewdly. Endowed with the keen powers of observation of the woodsman, and cut off from books, they are led to search themselves for the explanation of phenomena or the solution of problems. Though hampered by ignorance, their intellects are natively strong and acute. Conscious of their natural ability, conscious too that they are behind the times, these people are painfully sensitive to criticism. Cut off so long and so completely, they have never been able to compare themselves with others, and now they find comparison odious. They resent the coming of "furriners" among them, on the ground that outsiders come to spy upon them and criticize, and "tell-tale," as they put it, unless they are convinced that it is some commercial mission or a political campaign that brings the stranger. His suspicions allayed, the mountaineer is the most generous host in the world. "Strangers, won't you light and

set? Hitch your beasties. This is a rough country, and I'm a poor man, but you can have all I've got." This is the usual greeting. If it is a question of spending the night, the host and his wife sleep on the floor and give the guests the bed. In a one-room cabin, the entertainment of strangers involves inconvenience, but this discomfort is never considered by the Kentucky highlander. When he says, "You can have everything I've got," this is no lip-service. At one cabin where we spent the night, when we were making our toilettes in the morning, the daughter of the house, with infinite grace and simplicity, offered us the family comb and her own toothbrush. Hospitality can go no further. This quality the Kentucky mountaineer has in common with the inhabitants of all remote, untrodden regions where inns are rare. But if he refuses to be reimbursed for his outlay and trouble, he is repaid in part by the news which the stranger brings, and the guest is expected to be very communicative. He must tell everything he has seen or heard on his journey through the mountains, and must meet a whole volley of questions of a strictly personal nature. Inquiries come as to his age, married or unmarried condition and the wherefore, his health, ailments, symptoms, and remedies.

The mountaineer has a circumscribed horizon of interests; he is little stirred by the great issues of the day, except those of a political nature, and for politics he has a passion. A discussion of party platforms or rival candidates for office will at any time enthral him, keep him away for a whole day from the spring ploughing or sowing. As we have explained, the mountains presented conditions for agriculture as little adapted for a slave industrial system as did those of New England. Hence, when the conflict of the systems of the North and of the South came to an issue in the Civil War, the mountain sections of the Southern States took the side of New England, and went over almost bodily into the Republican party. Such was their zeal for the Union, that some of the mountain counties of Kentucky contributed a larger quota of troops, in proportion to their population, for the Federal army than any other counties in the Union. The enthusiasm of those days survives in that section to-day in their staunch adherence to the Republican party. The spirit has been encouraged also by the fact that topography has defined the mountain section as one of the political divisions of the State by a kind of common law of both political parties in their conventions and in common parlance. Although more sparsely populated than any of the others, the mountain division, from its greater

local unity, is relatively much stronger in party conventions, since its delegate vote is more likely to be a unit. In consequence of this fact, it is sure to get a fair proportion of its men as candidates upon the State ticket, and its party vote can be counted upon with considerable accuracy. Knowing, therefore, that they are a strong factor in the politics of the State, it is not surprising that the Kentucky mountaineers should find therein a great interest.

Men who, from the isolation of their environment, receive few impressions, are likely to retain these impressions in indelible outline; time neither modifies nor obliterates them. Thus it is with the Kentucky mountaineer. He never forgets either a slight or a kindness. He is a good lover and a good hater; his emotions are strong, his passions few but irresistible; because his feelings lack a variety of objects on which to expend themselves, they pour their full tide into one or two channels and cut these channels deep. Like all mountain-dwellers, they love their home. They love the established order of things. Their remoteness from the world's great current of new ideas has bred in them an intense conservatism, often amounting to bitter intolerance. For instance, they were so outraged by the divided skirts and cross-saddle riding of some of the women of our party, that in one county they were on the point of blocking our way; in another, they were only dissuaded from a raid on the camp by a plea from a leading man of the town for the two Kentucky women of the party who used side-saddles, and everywhere they gave scowling evidence of disapproval. There were no jeers; the matter was to them too serious for banter or ridicule. Nor was their feeling, as we shall see later, an outgrowth of a particularly high and delicate standard of womanhood; it was more a deep-seated dislike of the unusual. Painfully lax in many questions of morals, they hold tenaciously to matters of form. The women who came into our camp at different times to visit us, in spite of a temperature of 90° Fahr., wore red woollen mitts, their tribute to the conventions.

The upland regions of all countries are the stronghold of religious faiths, because the conservatism there bred holds to the orthodox, while the impressive beauty and grandeur of the natural surroundings appeals to the spiritual in man. Such a religion, however, is likely to be elemental in character—intense as to feeling, tenacious of dogma, but exercising little or no influence on the morals of everyday life. This is the religion of the Kentucky mountaineer. By nature he is reverential. Caves are "God's houses," sun time is

"God's time," indicated by the noon-mark traced with charcoal on the cabin door. A God-fearing man has the unlimited respect of every one in the mountains. A preacher is a privileged person. Wherever he goes he finds free board and lodging for himself and his horse, and his horse is always shod free. In that lawless country, a man who shoots a preacher is ever after an object of aversion, and there is a general assumption that the murderer will not live long—either a superstition or a generalization from the experience that often some individual constitutes himself an arm of the Almighty to punish the offender. One who is a preacher must be "called" to the work, and must serve without pay. The "call" does not presuppose any previous preparation for the profession, and naturally involves some modern substitute for Paul's tent-making to earn a livelihood. The result in the Kentucky mountains is sometimes amazing. Preachers there have been known to be whisky distillers. Some have been seen to take one or two drinks of liquor while delivering a sermon. We attended an outdoor "meetin'" conducted by one whose widowed sister ran a moonshine still. The best are farmers or country storekeepers. All are more or less ignorant, some densely so. We heard one man preach who could neither read nor write. At a meeting of some sectarian association in the fall of 1898, a mountain preacher advanced the opinion that the old blueback spelling-book gave all the education that a preacher needed. The style of preaching that appeals to the mountaineer is purely hortatory. It begins in a natural tone of voice, but, like all highly emotional speech, soon rises to rhythmical cadences, and then settles to a sustained chant for an hour or more. Any explanatory remarks are inserted parenthetically in a natural voice. This, and only this, stirs the religious fervour of the mountaineer. A clergyman from one of our cities who was doing missionary work among these people was met with the criticism after his service, "Stranger, I 'lowed to hear ye preach, and ye jest talked."

Though his religion is emotional and little suggestive of a basis in rationalism, yet the mountaineer takes his mental gymnastics in vigorous discussion of dogma. This seems to be the one form of abstract reasoning open to him—an exercise natural to the Teutonic mind. He is ignorant, remember, therefore positive and prone to distinguish many shades of belief. Sects are numerous. There are four recognized kinds of Baptists in the mountains. Denominational prejudice is so strong that each denomination refuses to have anything to do with another. A Methodist refuses to send

his children to the Presbyterian mission school in his neighborhood, though it is far superior to anything else at his command, and costs him nothing. For this reason the work of the various Home Mission boards in the mountains has achieved only limited results as to number. Only undenominational work, like that of a social settlement, can reach all the people of one locality; and in view of the sparsity of the population, this is a vital matter.

In spite of the intensity of religious feeling, the number of communicants of all denominations forms only from five to fifteen per cent. of the total population. The mountains of Eastern Kentucky show the largest area of this low percentage in the United States, east of the Missouri River and the Indian Territory. It may be due to the lack of churches and of any church organization where the preachers are "called" and do not form a distinct profession. Baptists, Disciples of Christ, and Methodists are most profusely represented. The sparsity of population with the diversity of sects permits religious service only once a month, when the circuit rider comes. This devoted man leaves his farm or store on Friday, and goes "creeter-back" over the mountains to each of his distant charges in turn. The district school building, in lieu of a church, answers for the meeting. Service is held on Saturday morning, and again on Sunday, for many of the congregation have come such a distance they feel entitled to a double feast of religion. They stay at the nearest cabin, which takes them in with their horses. After the Saturday sermon, the secular affairs of the church are attended to, as the mountaineer considers it unseemly to transact any business, even the disciplining of a delinquent member, on Sunday, although outside the sacred precincts he trades horses and indulges his taste for conviviality. Religion is something to be kept assiduously apart from common everyday living.

The fact that the profession of a mountain preacher is only an avocation with its consequent secondary claim upon his time, the fact of the severity of winter weather for horseback travel, and of the impassability of the roads at this season both for pastor and people, render church worship intermittent in this upland region, and at the same time explain the curious custom of the mountain funeral. This never takes place at the time of interment, but is postponed for months or years. It is desirable to have the ceremony at a time when the roads are passable, when the preacher will not be detained by the harvesting of his corn crop, and when there can be a great gathering of kinfolk, for the clan instinct is strong

among these people, and a funeral has its cheerful side in the opportunity of social intercourse it affords. Sometimes a long arrear of funerals has to be observed, if adverse circumstances for several years have prevented a family gathering. At one cabin we visited, the woman of the house told us she was getting ready for a big gathering at her place on the first of October, when the funerals of five of her relatives were to be preached. A university man, traveling through the mountains to make some scientific research, told us he had recently heard a sermon preached in honor of an old man who had died a year before and of a baby girl who had departed this life in 1868. The prominence given to funeral sermons in the season of good roads lends a sombre cast to the religion of the mountaineer, and strengthens in him a fatalistic tendency which is already one of his prominent characteristics, born doubtless of the hopelessness of his struggle with natural conditions. This feeling is so strong that it goes to astonishing lengths. It frankly condemns missions and Sunday schools as gratuitous meddling with the affairs of Providence. An Episcopal bishop recently, on arriving in a mountain village, heard that one of the families there was in great distress, and went immediately to make a visit of condolence. When he inquired as to the cause of their grief, he learned that a ten-year-old son had disappeared the evening before, and they had reason to suppose he had been lost in a large limestone cave which ran back two miles under the mountain not far away. In answer to his question if their search had been fruitless, he learned they had made no attempt at search, but "if he's to die, he's to die" came the wail, with pious ejaculations as to the will of God. In a few moments the man of God was striding along the trail to the cave, a posse of men and boys armed with candles and lanterns pressing close upon his heels, and in two hours the lost child was restored to the bosom of its family.

The morals of the mountain people lend strong evidence for the development theory of ethics. Their moral principles are a direct product of their environment, and are quite divorced from their religion, which is an imported product. The same conditions that have kept the ethnic type pure have kept the social phenomena primitive, with their natural concomitants of primitive ethics and primitive methods of social control. Such conditions have fostered the survival of the blood-feud among the Kentucky mountaineers. As an institution, it can be traced back to the idea of clan responsibility which held among their Anglo-Saxon forefathers; and it is

this Old World spirit which animates them when the eldest man of a family considers it a point of honor to avenge a wrong done to one of his kindred, or when a woman lays upon her sons the sacred obligation of killing the murderer of their father. In a community that grows from within by natural increase, hereditary instincts are strong, and clan traditions hold sway. But if the blood-feud was decadent among the colonial ancestors of our Kentucky mountainers, the isolation of this wild upland region was all-sufficient to effect its renascence, and to-day in some counties it is a more powerful factor of social control than the courts of law. The mountains, by reason of their inaccessibility and the sparsity of their populations, saw a great prolongation of pioneer days and pioneer organization of society, where every man depended on his own strong arm or rifle to guard his interests and right his wrongs. When the law invaded this remote region, it found the feud established and the individual loath to subordinate himself to the body politic. This individual was justified to himself by the almost universal miscarriage of justice. For the administration of the law is almost impossible in a feud case. It is next to impossible to convict a murderer in his own county, because the jury, and often the witnesses, are intimidated by the party of the defendant, and will fail to render a verdict of guilty; or, if the murder was committed to avenge some real wrong, the mountain jury, trained by tradition in their peculiar ideas of family honor, feels itself in sympathy with the criminal and acquits him. This they do without compunction, for they have as yet only a rudimentary conception of the sacredness of the law. The court often tries a change of venue, but the cost of this is particularly burdensome in a poor community, and the change is made to an adjoining county, where sympathy with mountain methods still holds. As a last resort, a rescue party of the defendant's relatives will make its attempt to defeat justice. An episode of the Howard and Baker feud, which raged during the summer of 1899 in Clay County, was the trial in Knox County of a Baker lad who had killed one of the opposing faction. Forty-two Bakers, armed with rifles and smokeless powder, came over the mountains to attend the trial, and openly established their "fort," or headquarters, in the county-seat. The boy, though clearly guilty, was acquitted, received his gun from the sheriff, and started off that night to the scene of hostilities, attended by his kindred as a guard of honor, not as a rescue party. The consequence is, if a man is killed in a quarrel, his relatives, knowing from long experience the helplessness of

the law, take the matter of punishment into their own hands, and at their first chance shoot the murderer. But the desire for personal vengeance is always present. In this same Howard and Baker feud, Tom Baker shot to death William White, an ally of the Howards and brother of the sheriff, as likewise kinsman of the county clerk, jailer, and judge. Naturally reluctant to give himself up to officials who were his personal enemies, Baker took to the hills until State troops were sent to the county, when he gave himself up to them. They pitched tent in the court-house yard, with a Gatling gun in position for action, and Tom Baker was placed in a tent in the centre, while no one was allowed to enter the military lines. But one day his guards brought Tom Baker for a moment to the door of his tent for a breath of air, and in that instant a shot, fired from the house of the sheriff, found its way to his heart. And the mountaineers openly exulted that a hundred trained soldiers could not protect a man who had been marked out as a victim.

The exciting causes of these feuds are manifold and often of a trifling nature. A misunderstanding in a horse trade, a gate left open and trespassing cattle, the shooting of a dog, political rivalry, or a difficulty over a boundary fence may start the trouble. The first shooting is sometimes done in the madness of moonshine intoxication. These mountaineers are men who hold life as light as a laugh, and to such anything is sufficient provocation to shoot; so the first blood is easily shed. The feud once started, a long and bloody war ensues, often for several years, in which waylaying, shooting from ambush, and arson are regular features. Sometimes pitched battles, engaging a hundred men or more, or a protracted siege of a factionist stronghold varies the programme. In the recent Howard and Baker feud, the principals were men of prominence, influence, and means, so they were able to command a number of followers. The main allies of the Howards were the White family, who have furnished members of the United States Congress, State Senate, and House of Representatives, and have controlled the offices of the county for fifty years. In the French and Eversole feud, which raged at intervals for many years in Perry County, the best people of the county were drawn into one or the other faction. And yet throughout this section there are those who deplore the reigning lawlessness.

In all mountain regions of the world crimes against persons are far more frequent than crimes against property. So in the Kentucky uplands the former are frequent, the latter rare. There is no

real disgrace attached to killing an enemy or a government officer who attempts to raid a moonshine still. There is little regard for the law as such, little regard for human life; but property is sacred. If a mountaineer is asked what, in the eyes of the mountain people, is the worst crime a man can commit, the answer comes, "Horse-stealing. If a man up here steals a horse, his best friend would not trust him again with fifty cents." Here speaks the utilitarian basis of his ethics in the almost impassable roads and trails of a pioneer country. To further inquiry he replies, "And the next worst thing is to steal logs out of a stream—indeed, to steal anything." The mountaineer is honest, scrupulously so. If a log from a lumber-camp is stranded on his field from a subsiding flood in the river, he rolls it into the water at the next rise; or if this is impossible on account of its weight, he lets it lie and rot as a matter of course, for it never occurs to him to cut it up for his own use. He never locks his door. If a robbery occurs, the punishment is swift and sure, for the hue-and-cry is raised up and down the valley or cove, and the escape of the culprit is almost impossible. Primitive in their shortcomings, these mountain people are primitive also in their virtues. The survival of the clan instinct has bred in them a high degree of loyalty; and their free, wild life, together with the remoteness of the law, has made them personally brave. They carry themselves with a certain conscious dignity which peremptorily forbids all condescension. Every man recognizes man's equality; there are no different classes. The consequence is the prevalence of that democratic spirit which characterizes the mountains of Switzerland and Norway.

In only one respect do the mountain people show marked moral degradation. There seems to be no higher standard of morality for the women than for the men, and for both it is low. This is true throughout the Southern Appalachians. The women are modest, gentle, and refined in their manners, but their virtue is frail. The idealism of youth generally keeps the girls pure, but when they marry and take up the heavy burdens that mountain life imposes upon them, their existence is sunk in a gross materialism, to which their environment offers no counteracting influence. Furthermore, the one-room cabin harbours old and young, married and single, of both sexes.

The Kentucky mountaineers are shut off from the inspiration to higher living that is found in the world of books. Isolation, poverty, sparsity of population, and impassability of roads make an education

difficult, if not impossible; the effect of these conditions is to be seen in the large percentage of illiterates in this section. Of the women over twenty-five years old and men over forty, 80 per cent. can neither read nor write. It is quite the usual thing to meet men of clear, vigorous intellects and marked capacity in practical affairs who cannot sign their own names. One mountaineer gave it as his observation that only one-half of the men over twenty years in his county could read. With the children it is somewhat better, because with the natural increase of population more district schools are established, and distances are therefore shortened for the tramp from cabin to school-house. To children who must go barefoot, or wear home-made moccasins, or who can afford not more than one pair of store shoes a year, the question of distances is a vital one, especially in the winter. The district schools are in session for five months, from August first till Christmas. The number of pupils at a school ranges from fifty to a hundred of all ages from six years to twenty, and all are in charge of one ignorant, often inexperienced teacher. They start in at their work in August, but it is soon interrupted for a week, because the instructor has to leave to attend the Teachers' Institute at the county-seat. On October first the older boys and girls are withdrawn from school for two weeks to help get in the harvest. Then November comes, and with it in alternative years certain important state and county elections. If the teacher is a man, being one of the few educated men of the section, he is probably a candidate for one of the county offices, or a member of his always numerous family connection aspires to the State legislature. In either event the teacher, with a mountaineer's sense of the importance of politics, closes school for ten days before the election in order to take part in the campaign. The middle of November the little flock reassembles, and the work of education goes on. But soon the fall rains come, and then the cold and snows of December. First the youngest and frailest are kept at home, but the older and sturdier ones continue, all the more eagerly now because they have the undivided attention of their instructor. The day comes, however, when the intense cold, combined with their own sad want of stout shoes and warm clothes, keeps even the most ambitious at home, and the teacher, with a sigh of relief or regret, locks the school-house door two weeks before the term is over. And the children, with no books at home on which to exercise their attainments, lose almost all that they have gained. And that all is little at best.

The district school of the Kentucky mountains is, in general, a rough log-cabin more or less crudely equipped according to the sparsity or density of the surrounding population. Some are entirely without desks, rude, uncomfortable benches of rough mountain manufacture taking their places. We saw no maps, and instead of blackboards, the unplanned planks of the inside of the walls had been stained a dark color for a space of 12 feet. In some of the back districts, where hardware is at a premium, the children are summoned from recess by a big wooden rattle. If the physical equipment of the school is primitive, the mental is almost as crude. The standard of education for the teachers is not high. Some of them have not progressed farther than the multiplication table in arithmetic, and all use ungrammatical English. Their preparation for teaching in general consists of the course of instruction at the district school and a few months' training at the so-called normal school of the county-seat. At a recent meeting of the Teachers' Institute in one of the mountain counties, when the subject up for discussion was "Devotional exercises in schools," it transpired that, of the fifty-six public school teachers present, only one in eight knew the Lord's prayer, a majority did not know what it was or where it came from, a majority did not own a Testament, and only two or three were the proud possessors of a Bible. Such ignorance is pitiable, but pitiable chiefly because it means lack of opportunity. Many of such teachers are half-grown boys and girls, who are in this way trying to earn the money, always so scarce in the mountains, "to go down to the settlements" and get an education. When their desire for knowledge is once aroused, they are strong, persistent, and ready to face any obstacle to get an education. Their vigorous minds, unjaded nerves, and hardened bodies combine to make them victors in the struggle. One boy of fourteen started out from his hillside home with his little bundle of clothes slung over his shoulder and 75 cents in his pocket, and tramped 25 miles over rough mountain trails to Berea, where the nearest school and college were. While taking the course there, he supported himself by regular jobs of various kinds, and maintained an excellent standing in his classes. When a mountain lad comes down to the State University at Lexington, it is a foregone conclusion that he is going to carry off the honors. We find at work in him the same forces that give success to the youth from the Swiss Alps and the glens of the Scotch Highlands, when these too come down into the plains to enter the fierce struggle for existence there. For the Kentucky

lad, the change has meant a stride over an intervening hundred and fifty years.

The life of the Kentucky mountaineer bears the stamp of the eighteenth century. His cabin home is rich in the local color of an age long past. The spinning-wheels for flax and wool, the bulky loom in the shed-room outside, the quaint coverlet on the beds within, the noon-mark on the door, and, more than all, the speech of the people, show how the current of time has swept by and left them in an eddy. The English they speak is that of the Elizabethan age. They say "buss" for kiss, "gorm" for muss, "pack" for carry, and "poke" for a small bag. Strong past tenses and perfect participles, like "holp" and "holpen," and the syllabic plural of words ending in *st*, like "beasties," are constantly heard. The Saxon pronoun "hit" survives not only in the upland regions of Kentucky, but also of the Virginias, Carolinas, and Tennessee. With the conserving power of the mountains has come into operation also their differentiating influence within their boundaries. Every valley has some peculiarity of vocabulary or speech which distinguishes it from the community across the adjoining range. The mountaineers have, therefore, criticized the dialect in John Fox's stories of this region, because they are not judges of the dialect of any locality but their own. A similar region of retarding isolation and of Elizabethan English is found on Hatteras Island, which lies a hundred miles off the North Carolina coast, remote from the usual line of travel. It has preserved a vernacular speech which to-day needs a glossary to be intelligible, but which is fast conforming to the modern standard, since the recent introduction of daily mail boats.

Survivals of speech are accompanied also by survivals of customs. In the mountains, the "rule of the road" when two horsemen or wagons meet is to turn to the left, as in England. Another relic of old Scotch or English custom we find in the "infare" or "infair," after a mountain wedding. This is the dinner given at the home of the groom's parents the day after the ceremony. It was observed in the rural districts of all Kentucky and Indiana up till fifty years ago, but now is adhered to only in the mountains. A more remarkable case of survival was discovered in 1878 by Prof. Nathaniel S. Shaler, of Harvard, on the borders of Virginia and Kentucky. There in a secluded valley he found men hunting squirrels and rabbits with old English short-bows. "These were not the contrivance of boys or of to-day, but were made and strung, and

the arrows hefted in the ancient manner. The men, some of them old, were admirably skilled in their use; they assured me that, like their fathers before them, they had ever used the bow and arrow for small game, reserving the costly ammunition of the rifle for deer and bear."

Though these people came into the mountains with eighteenth-century civilization, their isolation and poverty not only prevented them from progressing, but also forced them to revert to earlier usages which at the time of their coming were obsolescent. This is the explanation of the feud, as has been shown above, of the use of the hand-mill and short-bow, and especially of the old English ballad poetry which constitutes the literature of these mountain folk to-day. This has survived, or, more properly, flourished in its mediæval vigor because it has not felt the competition of books. The scant baggage of the pioneer immigrants from colonial Virginia and Carolina could not allow much space for books, and the few that did make the trip across the Appalachian Mountains were used up, from much reading and handling, by one generation. Poverty and inaccessibility prevented an invasion of new books from without, and from within there was no competition from newspapers. There are to-day twenty contiguous mountain counties, covering altogether an area of 6,000 square miles, not one of which can boast a printing-press. Under these circumstances, the Kentucky mountaineer reverted to his ancestral type of literature and revived ballad poetry. This has now been handed down from lip to lip through generations, the slightly variant form and phrase only testifying to its genuineness. The ballad of "Barbara Allen," popular in Great Britain three hundred years ago, and known now in America only to the musical antiquarian, is a stand-by in several of the mountain counties. The tragic ballad of "Little Sir Hugh," or "The Jewish Lady," as it is variously called, traces back to the Prior's Tale of Chaucer. The lengthy ballad of "Lord Bateman," or "The Turkish Lady," shows unmistakable identity with the poem of the same name in Kurlock's "Ancient Scottish Ballads," though the Scotch version is longer.

Animated by the spirit of minstrelsy, the mountaineers have composed ballads on the analogy of the ancient. These are romantic or heroic and of narrative length. We heard a woman sing a native ballad of fifty-two stanzas, entitled "Beauregard and Zollicoffer," which recounted the deeds of these two generals of the Civil War. The music for all these ballads is in a weird minor key, and is sung

in a nasal tone. So far as we were able to judge, the women are the chief exponents of mountain minstrelsy, and the accuracy of their memories for these long poems is suggestive of Homeric days. Spain and Sicily are perhaps the only other parts of the civilized world, at least in Europe and America, where modern folk-songs are still composed in the form of ballad poetry.

The whole civilization of the Kentucky mountains is eloquent to the anthropogeographer of the influence of physical environment, for nowhere else in modern times has that progressive Anglo-Saxon race been so long and so completely subjected to retarding conditions; and at no other time could the ensuing result present so startling a contrast to the achievement of the same race elsewhere as in this progressive twentieth century.

THE INFLUENCE OF THE PRECIOUS METALS ON AMERICAN EXPLORATION, DISCOVERY, CONQUEST AND POSSESSION*

BY

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EARLY EXPLORATIONS AND DISCOVERIES. Beginning with the first explorer who sailed across the Atlantic, "the expectation of finding a land rich in treasures of gold and silver or in products easily sold for the metals was the prevailing motive in the minds of most of the early discoverers and explorers." Whitney says‡ the sixteenth century travelers had little else in mind save the recompense for their toils and dangers in the rich mines of the precious metals which they were going to discover. Thus exploration was prompted by the desire for gold or for the lucrative trade in gold and spices from the Orient. The news of immensely rich empires, and mines of gold and silver ceaselessly attracted Spanish exploration and conquest into new quarters and thereby the more rapidly and extensively opened up the New World to the knowledge of mankind. The

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† Read before the Association of American Geographers, Baltimore, 1908.

‡ Whitney, J. D. *Metallic Wealth of the United States*, p. xxi.